

The Rationale for Drug Law Updates

The present drug statutes exist as a conscious attempt at reducing the harm caused by the abuse of substances. The altering of rational consciousness, the creation of dependencies, the redirection of family resources and the subrogation of human dignity have been the rationale for the prohibition of certain drugs, since the turn of the twentieth century. In the interval since, the spectrum of abused substances has broadened to include a range of materials from new synthetic drugs to potentially psychoactive materials as superficially benign as glue. Whatever the mechanisms driving the human pursuit of altered consciousness, society is motivated to reduce harm to both the individual and the culture as a whole, by limiting access to such materials through prohibition.

Over the past hundred years, society has attempted to address each new challenge to the human psyche with legislation appropriate to the level of harm associated with the substance abused. The last revision the drug statutes was the classification of Ketamine as a class A drug a half decade ago. Since then a number of new agents have appeared and several deficiencies in the existing drug statutes have appeared. This proposal is for a consideration of certain defects in existing laws and the addition of new substances. In particular, the amendments will consider the "date rape" drug Ketamine, the "club/designer" drug MDMA (ecstacy) and cocaine. In an attempt to present the proposed changes in a hierarchy of need, this presentation will be in order of degree of harm from greatest to least. However, each proposal has a strong rationale and the entire package is being advocated by the author for consideration as a whole by the Legislature.

The first substance under consideration is Ketamine. This drug appeared during the Viet-Nam War as a rapid acting anesthetic, meant to quickly constrain soldiers injured in combat, so they could be rendered passive and manageable as patients. Beyond combat use, it never became a routine anesthetic because of the severe dissociative state experienced with returning consciousness. That is, returning consciousness was accompanied with a severe sense of vertigo and delusion. Beyond its utility as a rapid anesthetic in combat, it never gained legitimacy as a routine clinical anesthetic. The only legitimate use of ketamine is in veterinary medicine to constrain/restrain animals for surgery; in particular, horses.

In the most recent amendment to control Ketamine, it was moved from the class E schedule to class A. This change to A level provides for the greatest penalties for simple possession. The rationale for this level of penalty is that Ketamine is not so much an agent of "recreational" use, as it is an agent of sexual assault. In the subculture of hallucinogen abuse, the very "dissociation" noted above makes ketamine the least sought of all the psychedelic drugs. "Ketamine" is not abused because of its unpleasant side effects. LSD, mescaline and mushrooms are the preferred venue of psychedelic exploration.

However, ketamine is sought out as a facilitator of sexual assault, because of the rapid anesthetic features which proved so valuable in combat. Ketamine is one of the major "Mickey Finn" or knockout agents of our times. It is a preferred choice of sexual assailants for an additional reason. During the interval of its influence, memory is lost, rendering a victim unable to recall the location of an assault or the identity of an assailant. The original intent of the legislature in scheduling ketamine as a Schedule A drug was to provide the highest level of penalties for being in simple possession of this "date rape drug." The statute has a flaw which may confound prosecution in the future. It may be remedied with the striking of a single word in the statute.

Ketamine is a "salt." It has a basic molecular structure which may exist in various forms. The ketamine "base" may associate with any of several side groups resulting in the existence of several "salts" of ketamine. For example, it may exist as ketamine hydrochloride, ketamine phosphate, ketamine sulfate and in other forms as well. The language of the existing statute was to provide for the several salt forms in which ketamine may appear.

However, the statute was amended with a flaw in its language. The flaw in the language constrains the definition to the single salt, ketamine hydrochloride. The statute may be amended to achieve its original intent with the striking of the single term "hydrochloride" from the current statute.

Ketamine is listed in M.G.L. chapter 94c section 31 as below:

(c) Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation that contains any quantity of the following substances including its salts isomers and salts of isomers whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designations:

- (1) Flunitrazepam
- (2) Gamma Hydroxy Butyric Acid
- (3) Ketamine Hydrochloride

Paragraph (c) is intended to proscribe all the salt and isomer combinations of the three base compounds beneath; that is flunitrazepam, gamma hydroxy butyric acid and the compound ketamine with all their salts and isomers. As written, only ketamine *hydrochloride* is proscribed by law. The spectrum of the other ketamine salts (ketamine phosphate, ketamine sulfate, etc.) lies completely outside the statute. The original intent of the law may be achieved with the striking of the single word *hydrochloride* from line 3. This will render the parent compound ketamine a schedule A drug as well as all its derivatives as delineated by the lead paragraph (c).

The second amendment proposed considers another language structure problem about the compound 3,4, methylenedioxy methamphetamine (MDMA). MDMA, also known as Ecstasy, is listed in the drug statue as a class B drug. It is listed in M.G.L. Chapter 94c, section 31 as a class B drug on line (8). Like other drugs (as Ketamine noted above) MDMA has a basic structure, from which a variety of salts may be prepared. However, MDMA is listed in isolation on line (8) with no qualifying paragraph to include its salts. This is the most *prevalent* drug with this language defect. The three drugs listed

immediately prior to MDMA are also subject to this flaw. As it stands, the particular schedule B section reads as follows:

- (5) Phenyl-2-Propanone (P2P)
- (6) Phenylcyclohexylamine (PCH)
- (7) Piperidinnocyclohexanecarbonitrile (PCC)
- (8) 3, 4 methylendioxy methamphetamine (MDMA)

Each of these base compounds is noted in isolation, without a qualifying paragraph which would include the various salts which may exist for each form. These four compounds are listed as 5,6,7 and 8 immediately beneath the qualifying paragraph for cocaine. The most useful and unequivocal manner of amending this defect would be to strike schedule B lines 5,6,7 and 8 at their current position and re-list them at the end of the class B schedule with their own qualifying paragraph as below:

(f) Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation that contains any quantity of the following substances including its salts, isomers and salts of isomers whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designations:

- (1) Phenyl-2-Propanone (P2P)
- (2) Phenylcyclohexylamine (PCH)
- (3) Piperidinocyclohexanecarbonitrile (PCC)
- (4) 3,4 methylenedioxy methamphetamine (MDMA)

To reiterate, the intention of the statute was to provide that the various forms of these agents would be proscribed. The existing language is inadequate to the task and will be repaired with the changes noted above.

The final consideration of this amendment proposal concerns the language of the schedule B drug cocaine. The current form has evolved from a pre World War II statute which considered cocaine as the natural extract of the coca plant. Through various changes the cocaine schedule has accounted for the various salts which may occur; that is, cocaine hydrochloride, cocaine sulfate etc. However the antique portion of the language creates a problem in the analytical lab, charged with the certification of the drug as cocaine under the law. The archaic language appears to restrict prohibition to the cocaine salts and derivatives prepared from the leaves of the coca plant.

M.G.L. chapter 94c under class B paragraph notes:

- (4) Coca leaves and any salt, compound, derivative or preparation of coca leaves, and any salt, compound derivative, or preparation thereof which is chemically equivalent or identical with any of these substances, except that the substances shall not include decocainized leaves or extraction of coca leaves, which extractions do not contain cocaine or ecgonine.

Paragraph (4) appears to limit cocaine prohibition to the plant product alone. The problem for the lab arises in this manner. The statute prohibits only the form of cocaine which is produced by the plant. The synthetic form is not covered by the statute, so the chemist is obliged to perform extra time consuming tests to determine that the naturally produced "l" isomer is present.

Any large organic molecule can exist in two forms. That is, any molecule can exist in one form with a particular structure and in a second form with the very same constituent atoms in a mirror image. Cocaine produced by the coca plant exists in a molecular form designated "l". A second theoretical form would exist with the same constituent atoms bonded into a molecular form which is a mirror image of the "l" form. This theoretical cocaine is designated "d". This theoretical form does not occur in nature and can only be produced synthetically at a relatively high cost of materials and labor. Because the manufacture of the "d" form is labor intensive and the price of precursors in the synthesis is steep, synthetic "d" cocaine does not exist in the underground market. However, because the statute prohibits only the natural form occurring in the coca plant, the lab certifying the presence of cocaine must perform the additional tests to determine that any cocaine detected is indeed the "l" form.

The archaic structure of the statute compels the analytical chemist to perform additional tests to establish that the l-cocaine is present and not the other form. This additional testing could be eliminated with the adoption of the language in the federal scheduling of cocaine. In this language, all forms or isomers of cocaine and the various salts are proscribed. Under the federal model, the additional tests distinguishing l-cocaine from d-cocaine are unnecessary. This time and labor may be redirected toward the identification of the more analytically complex "designer" drugs.

The federal scheduling has wording which includes the non-plant variations. However, like the state schedule, the federal statute imbeds cocaine within the opium language. For clarification, the cocaine descriptors should not be commingled with the opium description. The current cocaine language should be struck and replaced with the new language in isolation from opium. The federal cocaine statute follows:

United States Code Title 21 Section 812

(a) Unless specifically excepted or unless listed in another schedule, any of the following substances whether produced directly or indirectly by extraction from substances of vegetable origin, or independently by means of chemical synthesis, or by a combination of extraction and chemical synthesis:

- (1) Opium and opiate, and any salt compound, derivative, or preparation of opium or opiate.
- (2) Any salt, compound, derivative, or preparation thereof which is chemically equivalent or identical with any of the substances referred to in clause (1), except that these substances shall not include the isoquinoline alkaloids of opium.
- (3) Opium and poppy straw.
- (4) coca leaves, except coca leaves and extracts of coca leaves from which cocaine, ecgonine, and derivatives of ecgonine or their salts have been removed; cocaine, its salts, optical and geometric isomers, and salts of isomers; ecgonine, its derivatives,

their salts, isomers, and salts of isomers; or any compound, mixture, or preparation which contains any quantity of any of the substances referred to in this paragraph.

The federal language is a model, in that it covers all the isomeric varieties of cocaine regardless of whether they are derived of the coca plant or synthesized in a chemical process (opening paragraph a). Additionally, in paragraph (4), the code includes the several isomeric "base" forms in which cocaine may appear and the several salts which may occur for each isomers. However, commingling coca with the opium section is clumsy from a rhetorical point of view because the two drugs are very different in structure, receptor sites in the brain and addictive qualities.

The federal code provides a precedent for language defining cocaine in a manner not requiring the extra testing for determining whether an exhibit is natural or synthetic cocaine. Similar language can be adapted to the current Massachusetts statute, applied in the cocaine section. The proposed change in the Massachusetts law is to drop the cocaine section in its current form M.G.L. Chapter 94c class B paragraph (4) and add the new language to the end of M.G.L. chapter 94c class B in its own paragraph.

In a final consideration of clarification in this important statute section, several of the most prominent isomers of cocaine should be listed specifically rather than alluded to as possible isomers. These particular isomers should be scheduled for their parent "base" structures, as well as for their various salts, similar to the qualifier paragraphs considered earlier. The particular isomers to add to the law (in addition to cocaine and ecgonine) would be
pseudococaine, allococaine and allopseudococaine.

Thus, with the elimination of the original cocaine text, the following amended language should be added to the end of M.G.L. Chapter 94c class B schedule:

(f) Unless specifically excepted or unless listed in another schedule, any of the following substances whether produced directly or indirectly by extraction from substances of vegetable origin, or independently by means of chemical synthesis, or by a combination of extraction and chemical synthesis:

coca leaves (except coca leaves and extracts of coca leaves from which cocaine, ecgonine, and derivatives of ecgonine or their salts have been removed) and the salts, optical and geometric isomers and salts of isomers; of cocaine, ecgonine, pseudococaine, allococaine and allopseudococaine, their derivatives, their salts, isomers and salts of their isomers; or any compound, mixture, or preparation which contains any quantity of any of the substances referred to in this paragraph.

Based upon the federal model which is not limited to the "natural" cocaine isomer and the need to clarify certain other isomers in a more specific manner, the following proposal is made regarding the cocaine statute. The current cocaine paragraph is deleted from its current position within the opium section and the new cocaine paragraph is placed at the end of M.G.L. 94c, class B.

-Conclusion-

The proposed changes to the drug laws above are the first attempts at updates in over five years. The ketamine change will provide a greater scope for the forms in which this “date rape” drug can appear. The change considered for MDMA schedule includes the various salt forms in which it may appear. Finally, the cocaine statute change will provide for the prohibition of both the naturally occurring and synthetic forms. Additionally, the amended language will specifically schedule several cocaine isomers of interest, rather than indirectly as generally noted “isomers.” This change will clarify certain vague notions in the previous language and free significant time to forensic laboratories identifying these materials.